

Chapter B5: UMRA Analysis

INTRODUCTION

Title II of the Unfunded Mandates Reform Act of 1995, Pub. L. 104-4, establishes requirements for Federal agencies to assess the effects of their regulatory actions on State, local, and Tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with “Federal mandates” that might result in expenditures by State, local, and Tribal governments, in the aggregate, or by the private sector, of \$100 million or more in any one year.

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Before promulgating a regulation for which a written statement is needed, section 205 of the UMRA generally requires EPA to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the objectives of the rule. The provisions of section 205 do not apply when they are inconsistent with applicable law. Moreover, section 205 allows EPA to adopt an alternative other than the least costly, most cost-effective, or least burdensome alternative if the Administrator publishes with the rule an explanation why that alternative was not adopted. Before EPA establishes any regulatory requirements that might significantly or uniquely affect small governments, including Tribal governments, it must have developed under section 203 of the UMRA a small government agency plan. The plan must provide for notifying potentially affected small governments, enabling officials of affected small governments to have meaningful and timely input in the development of EPA regulatory proposals with significant intergovernmental mandates, and informing, educating, and advising small governments on compliance with regulatory requirements.

EPA estimates that facilities subject to the final Phase II rule would incur annualized post-tax compliance costs of \$249.5 million (\$2002). Of this total, \$216.3 million is incurred by private sector facilities, \$23.1 million is incurred by facilities owned by State and local governments, and \$10.1 million is incurred by facilities owned by the Federal government.¹ State and Federal permitting authorities incur an additional \$4.1 million to administer the rule, including labor costs to write permits and to conduct compliance monitoring and enforcement activities. EPA estimates that the highest undiscounted cost incurred by the private sector in any one year is approximately \$419.1 million in 2009. The highest undiscounted cost incurred by the State and local governments in any one year is approximately \$43.5 million in 2008 (including facility compliance costs and State implementation costs). Thus, EPA has determined that this rule contains a Federal mandate that may result in expenditures of \$100 million or more for State, local, and Tribal governments, in the aggregate, or the private sector in any one year. Accordingly, under §202 of the UMRA, EPA has prepared a written statement, presented in the preamble to the final rule, that includes (1) a cost-benefit analysis; (2) an analysis of macroeconomic effects; (3) a summary of State, local, and Tribal input; (4) a discussion related to the least burdensome option requirement; and (5) an analysis of small government burden. This chapter contains additional information to support that statement, including information on compliance and administrative costs, and on impacts on small governments.

B5-1 ANALYSIS OF IMPACTS ON GOVERNMENT ENTITIES

Governments may incur two types of costs as a result of this final rule:

- ▶ direct costs to comply with the rule for facilities owned by government entities, and
- ▶ administrative costs to implement the rule.

Both types of costs are discussed below.

¹ The costs incurred by the Federal government are not part of the unfunded mandates analyses and are therefore not included in the remainder of this chapter. The Federal government owns 14 of the 554 Phase II facilities.

B5-1.1 Compliance Costs for Government-Owned Facilities

Table B5-1 presents the number of government entities that own facilities subject to the final rule and the number of in-scope facilities owned by those governments. Of the 554 existing in-scope facilities subject to the final rule, 62 are owned by a State or local government. Of those 62 facilities, 48 are owned by municipalities, seven are owned by State governments, and seven are owned by political subdivisions. None of the Phase II facilities are owned by a Tribal government.

Table B5-1 also presents the total annualized compliance costs, average annualized costs, and maximum undiscounted costs in any one year for facilities owned by different types of governments. The total annualized compliance cost incurred by the 62 government-owned Phase II facilities is \$23.1 million, or approximately \$372,000 per facility.² The 48 facilities owned by municipalities incur \$17.6 million annually, which is the largest share of the total annualized compliance cost for government-owned facilities. The seven State-owned facilities account for the largest average annualized compliance cost, with approximately \$602,000 per facility. The maximum undiscounted cost borne by the 62 facilities is \$37.0 million, estimated to be incurred in 2008.

Ownership Type	Number of Government Entities	Number of Facilities	Total Annualized Compliance Costs (in millions, \$2002)	Average Compliance Cost (per facility, \$2002)	Maximum One-Year Facility Compliance Costs (in millions, \$2002)
Municipality	36	48	\$17.6	\$366,000	\$24.5 (2005)
State Government	4	7	\$4.2	\$602,000	\$13.9 (2008)
Political Subdivision	3	7	\$1.3	\$180,000	\$1.8 (2006)
Total	43	62	\$23.1	\$372,000	\$37.0 (2008)

Source: U.S. EPA analysis, 2004.

B5-1.2 Administrative Costs

The requirements of section 316(b) are implemented through the National Pollutant Discharge Elimination System (NPDES) permit program. Forty-five States and one Territory currently have NPDES permitting authority under section 402(c) of the Clean Water Act (CWA). EPA estimates that States and Territories will incur three types of costs associated with implementing the requirements of the final rule: (1) start-up activities, (2) permitting activities associated with the initial NPDES permit containing the new section 316(b) requirements and subsequent permit renewals, and (3) annual activities.³ EPA estimates that the total costs for these activities will be \$4.0 million, annualized over 30 years at a seven percent discount rate. Table B5-2 below presents the estimated annualized costs of the three major administrative activities.

² Chapter B1: Summary of Compliance Costs of this Economic and Benefits Analysis (EBA) presents information on the unit costs used to estimate facility compliance costs and the assumptions used to calculate annualized costs.

³ The costs associated with implementing the requirement of the final Phase II rule are documented in EPA's Information Collection Request (U.S. EPA, 2003).

Table B5-2: Annualized Government Administrative Costs (in millions, \$2002)	
Activity	Cost
Start-Up Activities	\$0.02
Permitting Activities	\$2.94
Annual Activities	\$1.04
Total	\$4.00

Source: U.S. EPA analysis, 2004.

Start-up costs are incurred only once by each of the 46 permitting authorities. Permitting costs and annual activities are incurred for every permit. Based on the specific permitting requirements of each in-scope facility, EPA calculated total government costs of implementing the final Phase II rule by adding the cost of start-up activities to the aggregate costs for each facility's first post-promulgation permit, repermitting activities, and annual activities. The maximum one-year undiscounted implementation cost incurred by the government is \$6.5 million, in 2008. EPA notes that the annualized cost of administrative activities depends on when they are incurred. If facilities come into compliance later than assumed in this analysis, permitting authorities' administrative activities will also occur in later years. As a result, the annualized costs of the rule to permitting authorities will be lower because administrative costs incurred in later years have lower net present values.

The incremental administrative burden on States will also depend on the extent of each State's current practices for regulating cooling water intake structures (CWIS). States that currently require relatively modest analysis, monitoring, and reporting of impacts from CWIS in NPDES permits may require more permitting resources to implement the final Phase II rule than are required under their current programs. Conversely, States that currently require very detailed analysis may require fewer permitting resources to implement the final rule than are currently required.

The following subsections present more detail on the three types of implementation costs.

a. Start-up activities

Forty-five States and one Territory with NPDES permitting authority are expected to undertake start-up activities to prepare for administering the final Phase II rule. Start-up activities include reading and understanding the rule, mobilization and planning of the resources required to address the rule's requirements, and training technical staff on how to review materials submitted by facilities and make determinations on the final Phase II rule requirements for each facility's NPDES permit. In addition, permitting authorities are expected to incur other direct costs, e.g., for purchasing supplies and copying. Table B5-3 shows the total start-up costs EPA estimated permitting authorities to incur. Each permitting authority is estimated to incur start-up costs of \$3,986 as a result of the final Phase II rule. EPA assumes that the initial start-up activities will be incurred by all permitting authorities at the end of 2004, the year of promulgation of the final Phase II rule.

Table B5-3: Government Costs of Start-Up Activities (per Regulatory Authority;\$2002)	
Start-Up Activity	Start-Up Costs
Read and Understand Rule	\$994
Mobilization/Planning	\$1,738
Training	\$1,205
Other Direct Costs	\$50
Total	\$3,986

Source: U.S. EPA analysis, 2004.

b. Initial post-promulgation permitting and repermitting activities

The permitting authorities will be required to implement the section 316(b) Phase II rule by adding compliance requirements to each facility's NPDES permit. Permitting activities include incorporating section 316(b) requirements into the first post-promulgation permit and making modifications, if necessary, to each subsequent permit. For this analysis, EPA assumed that the first permit containing the new section 316(b) requirements will be issued between 2005 and 2009.⁴ Repermitting activities will take place every five years after initial permitting.

The final Phase II rule requires facilities to submit the same type of information for their initial post-promulgation permit and for each permit renewal application. Therefore, the type of administrative activities required by the initial post-promulgation and each subsequent permit are similar. EPA identified the following major activities associated with State permitting activities: reviewing submitted documents and supporting materials, verifying data sources, consulting with facilities and the interested public, determining specific permit requirements, and issuing the permit. Table B5-4 below presents the State permitting activities and associated costs, on a per permit basis. The permitting costs do not vary by type of facility to be permitted (however, the costs associated with permitting facilities with (a) a recirculating system or a wedgewire screen in the baseline or (b) a facility installing a new wedgewire screen are less). The burden of repermitting is expected to be smaller than the burden of initial permitting because the permitting authority is already familiar with the facility's case and the type of information the facility will provide.

Two of the permitting activities presented within Table B5-4 pertain only to facilities opting for a site-specific determination of best technology available (BTA). An authorized State is able to permit a facility to opt for a site-specific determination if it can demonstrate that the proposed technology will result in environmental performance within a watershed that is comparable to the reductions in impingement and entrainment mortality that would otherwise be achieved under the final Phase II rule. EPA estimates that 211 facilities will apply for a site-specific determination.⁵

⁴ For an explanation of how the compliance years were assigned to facilities subject to the final Phase II rule, see *Chapter B1: Summary of Compliance Costs* of this EBA.

⁵ EPA is not including this site-specific determination as a direct cost for complying facilities because this is an optional activity that the facility will choose only in cases where the cost of the alternative technology plus the cost of the site-specific determination is less than the cost of the technology otherwise required by the final Phase II rule. However, the site-specific determination costs for permitting authorities are not optional, and thus are included in EPA's estimates of total cost.

Table B5-4: Government Permitting Costs (per Permit; \$2002)		
Activity	First Permit	Repermitting
Review Source Water Physical Data	\$290	\$114
Review CWIS Data	\$871	\$259
Review CWS Operation Narrative	\$871	\$259
Review Proposal for Collection of Information for Comprehensive Demonstration Study	\$1,325	\$414
Review Source Water Body Flow Information	\$290	\$114
Review Design and Construction Technology Plan	\$1,488	\$424
Review Impingement Mortality & Entrainment Characterization Study	\$22,200	\$6,660
Review Pilot Study for New Impingement & Entrainment Technology	\$1,325	\$414
Review Restoration Measures ^a	\$23,760	\$7,128
Determine Monitoring Frequency	\$290	\$114
Determine Record Keeping and Reporting Frequency	\$290	\$114
Considering Public Comments	\$1,325	\$414
Issuing Permits	\$263	\$62
Permit Record Keeping	\$131	\$24
Other Direct Costs	\$300	\$300
Total (without site-specific determination of BTA)^b	\$33,636	\$10,399
Review Information to Support Site-Specific Determination of BTA ^c	\$47,520	\$14,256
Establish Requirements for Site-Specific Technology ^c	\$1,162	\$322
Total Cost of Site-Specific Activities	\$48,682	\$14,578
Total (including a site-specific determination of BTA)^b	\$82,317	\$24,977

^a Assumed to apply to only 10 percent of facilities.

^b Individual numbers may not add up to total due to independent rounding.

^c Cost incurred only for permits of facilities conducting site-specific demonstrations.

Source: U.S. EPA analysis, 2004.

Table B5-4 shows that initial post-promulgation permits that do not require a site-specific determination of BTA are expected to impose an average per permit cost of \$33,636 on the issuing permitting authority. For initial post-promulgation permits that include a site-specific determination, the State administrative costs associated with the site-specific determination add an additional \$48,682, resulting in total per permit costs of \$82,317.

The State administrative cost for a permit renewal that does not include a site-specific determination is \$10,399. For facilities that do conduct a site-specific determination, the cost per permit imposed on the permitting authority increases by \$14,578, resulting in an average permit cost of \$24,977.

Another start-up cost incurred by permitting authorities is associated with review of verification studies conducted at facilities. In addition to reviewing the studies, permitting authorities must modify permits in case of unfavorable study results. In total, verification study review is expected to cost permitting authorities \$780 per permit. Table B5-5 lists the components of verification study review.

Table B5-5: Government Costs of Verification Study Review (per Permit; \$2002)	
Activity	Costs
Review of Verification Studies	\$228
Permit Modification Due to Unfavorable Results	\$518
Recordkeeping	\$24
Other Direct Costs	\$10
Total	\$780

Source: U.S. EPA analysis, 2004.

A final component of start-up costs is the cost associated with alternative regulatory requirements. States can adopt alternative regulatory requirements in their NPDES program that result in reductions of impingement mortality and entrainment within a watershed. If these States can demonstrate to the Administrator that the reductions are comparable to what would otherwise be achieved under rule, the Administrator will approve these alternative regulatory requirements. EPA estimates that 10 regulatory permitting authorities will incur costs associated with alternative regulatory requirements. The expected per permit cost to permitting authorities of establishing alternative regulatory requirements at those facilities is \$7,054. Table B5-6 shows the cost of each component of establishing alternative regulatory requirements.

Table B5-6: Government Costs of Alternative Regulatory Requirements (per Permit; \$2002)	
Activity	Costs
Document Alternative Regulatory Requirements	\$1,368
Document Environmental Conditions within Watershed	\$1,824
Include Supporting Historical Studies, Calculations, and Analyses	\$3,528
Submit Documentation	\$96
Recordkeeping	\$138
Other Direct Costs	\$100
Total	\$7,054

Source: U.S. EPA analysis, 2004.

c. Annual activities

In addition to the start-up and permitting activities discussed previously, permitting authorities will have to carry out certain annual activities to ensure the continued implementation of the requirements of the final Phase II rule. These annual activities include reviewing yearly status reports, tracking compliance, determination on monitoring frequency reduction, and record keeping.

Table B5-7 below shows the annual activities that will be necessary for each permit, beginning in the year after the first post-promulgation permit, and the estimated costs of each activity. A total cost of \$1,884 is estimated for each permit per year.

Table B5-7: Government Costs for Annual Activities (per Permit: \$2002)	
Annual Activity	Annual Costs
Review of Yearly Status Report	\$684
Compliance Tracking	\$581
Determination of Monitoring Frequency Reduction	\$456
Record Keeping	\$138
Other Direct Costs	\$25
Total	\$1,884

Source: U.S. EPA analysis, 2004.

B5-1.3 Impacts on Small Governments

EPA's analysis also considered whether the final rule may significantly or uniquely affect small governments (i.e., governments with a population of less than 50,000). Table B5-8 presents by ownership size: (1) the number of entities owning facilities subject to the regulation; (2) the number of facilities; (3) the estimated annualized post-tax compliance costs; and (4) the average annualized post-tax compliance cost per facility. EPA identified 17 facilities (of the 62 government-owned facilities) subject to the final rule that are owned by small governments.⁶

Table B5-8: Number of Regulated Facilities and Post-Tax Compliance Costs by Entity Size					
Ownership Size	Number of Entities	Number of Phase II Facilities	Total Annualized Compliance Costs (post-tax, in millions, \$2002)	Average Annualized Compliance Cost per Facility (post-tax, \$2002)	Maximum Annualized Per Facility Compliance Costs (post-tax, in millions, \$2002)
Facilities Owned by Small Governments	17	17	\$5.4	\$316,300	\$1.3
Facilities Owned by Large Governments	27	59	\$27.8	\$470,200	\$2.3
Facilities Owned by Small Non-Governments	8	8	\$1.4	\$173,800	\$0.3
Facilities Owned by Large Non-Governments	74	470	\$214.9	\$457,600	\$10.8
All Facilities	126	554	\$249.5	\$450,500	\$10.8

Source: U.S. EPA analysis, 2004.

The total annualized compliance cost for the 17 facilities owned by small governments is \$5.4 million, or approximately \$316,300 per facility. In comparison, the total annualized compliance cost for the 59 facilities owned by large governments is \$27.8 million, or approximately \$470,200 per facility. The eight small non-government facilities incur total annualized compliance cost of \$1.4 million, or \$173,800 per facility. Total annualized compliance cost for the 470 large non-government facilities is \$214.9 million, or \$457,600 per facility. These numbers support EPA's evaluation that small governments would not be significantly or uniquely affected by the final Phase II rule. The per facility average compliance

⁶ Chapter B4: Regulatory Flexibility Analysis of this EBA provides more information on EPA's determination of the size of entities owning the 554 in-scope facilities.

cost incurred by facilities owned by small governments is less than the per facility compliance costs incurred by facilities owned by large governments and privately-owned facilities subject to the final Phase II rule.

B5-2 COMPLIANCE COSTS FOR THE PRIVATE SECTOR

The private sector only incurs compliance costs associated with facilities subject to this final rule. These direct facility costs already include the cost to facilities of obtaining their NPDES permits. Of the 554 in-scope facilities subject to the final rule, EPA identified 478 to be owned by a private entity.⁷

The methodology for determining compliance costs for the Phase II facilities is presented in *Chapter B1: Summary of Compliance Costs* of this EBA. Total annualized (post-tax) compliance costs for the 478 privately-owned facilities are estimated to be \$216 million, discounted at seven percent. The maximum aggregate post-tax cost (undiscounted) for all 478 facilities in any one year is estimated to be \$419 million, which will be incurred in 2009.

B5-3 SUMMARY OF UMRA ANALYSIS

EPA estimates that the final section 316(b) Existing Facilities Rule will result in expenditures of \$100 million or greater for State and local governments, in the aggregate, or for the private sector in any one year. Table B5-9 summarizes the costs to comply with the rule for the 540 in-scope facilities (excluding the 14 facilities owned by the Federal government) and the costs to implement the rule for permitting authorities.

Table B5-9: Summary of UMRA Costs (in millions, \$2002)						
Sector	Total Annualized Cost (Post-Tax)			Maximum One-Year Cost		
	Facility Compliance Costs	Government Implementation Costs	Total	Facility Compliance Costs	Government Implementation Costs	Total
Government Sector	\$23.1	\$4.0	\$27.1	\$37.0	\$6.5	\$43.5
Private Sector	\$216.3	n/a	\$216.3	\$419.1	n/a	\$419.1

Source: U.S. EPA analysis, 2004.

The total annualized cost of the final section 316(b) Phase II Existing Facilities Rule to State and local governments is approximately \$27.1 million, consisting of \$23.1 million in facility compliance costs and \$4.0 million in government implementation costs. The maximum one-year costs that will be incurred by government entities is expected to be \$43.5 million (\$37.0 million in facility compliance costs and \$6.5 million in implementation costs), incurred in 2008. Total annualized costs borne by the private sector is estimated by EPA to be \$216.3 million. The maximum one-year cost to the private sector is \$419.1 million, which will be incurred in 2009.

⁷ For the purposes of this analysis, private entities include utilities, nonutilities, and rural electric cooperatives.

REFERENCES

U.S. Environmental Protection Agency (U.S. EPA). 2004. *Information Collection Request for Cooling Water Intake Structures, Phase II Existing Facility Final Rule*. ICR Number 2060.02. February 2004.

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